

PATENT
Attorney Docket No. CCK94028RE

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of:)
Douglas R. Cardy et al.) Group Art Unit: 2614
Application Serial No.: 10/054,245) Examiner: J. Phan
Filed: January 24, 2002)
For: TELECOMMUNICATIONS SYSTEM)
HAVING SEPARATE SWITCH)
INTELLIGENCE AND SWITCH FABRIC)

APPEAL BRIEF

U.S. Patent and Trademark Office
Customer Window, Mail Stop Appeal Brief – Patents
Randolph Building
401 Dulany Street
Alexandria, Virginia 22314

Sir:

This Appeal Brief is submitted in response to the Office Action mailed August 18, 2009 and in support of the Notice of Appeal filed November 17, 2009.

TABLE OF CONTENTS

I.	REAL PARTY IN INTEREST.....	3
II.	RELATED APPEALS AND INTERFERENCES.....	4
III.	STATUS OF CLAIMS.....	5
IV.	STATUS OF AMENDMENTS.....	6
V.	SUMMARY OF THE CLAIMED SUBJECT MATTER.....	7
VI.	GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL.....	15
VII.	ARGUMENT.....	16
VIII.	CLAIMS APPENDIX.....	41
IX.	EVIDENCE APPENDIX.....	58
X.	RELATED PROCEEDINGS APPENDIX.....	59

I. **REAL PARTY IN INTEREST**

The real party in interest of the present application, solely for purposes of identifying and avoiding potential conflicts of interest by board members due to working in matters in which the member has a financial interest, is Verizon Communications Inc. and its subsidiary companies, which currently include Verizon Business Global, LLC (formerly MCI, LLC) and Cellco Partnership (doing business as Verizon Wireless, and which includes as a minority partner affiliates of Vodafone Group Plc). Verizon Communications Inc. or one of its subsidiary companies is an assignee of record of the present application.

Appeal Brief

Application Serial No. 10/054,245
Attorney Docket No. CCK94028RE

II. RELATED APPEALS AND INTERFERENCES

The Appellants are unaware of any related appeals, interferences or judicial proceedings.

Appeal Brief

Application Serial No. 10/054,245
Attorney Docket No. CCK94028RE

III. STATUS OF CLAIMS

Claims 1-8, 11-51, 53, 54, 56, 57, 59, 61 and 62 have been rejected and claims 9 and 10 have been allowed. Claims 52, 55, 58 and 60 were previously canceled without prejudice or disclaimer. Claims 1-8, 11-51, 53, 54, 56, 57, 59, 61 and 62 are the subject of the present appeal.

Appeal Brief

Application Serial No. 10/054,245
Attorney Docket No. CCK94028RE

IV. STATUS OF AMENDMENTS

No Amendment has been filed subsequent to the Office Action mailed August 18, 2009.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

The following summary of the presently claimed subject matter indicates certain portions of the specification (including the drawings) that provide examples of embodiments of elements of the claimed subject matter. Since the present application is a Reissue application, the portions of the application identified below refer to portions of U.S. Patent No. 6,041,109 to Cardy et al. It is to be understood that other portions of the specification not cited herein may also provide examples of embodiments of elements of the claimed subject matter. It is also to be understood that the indicated examples are merely examples, and the scope of the claimed subject matter includes alternative embodiments and equivalents thereof. References herein to the specification are thus intended to be exemplary and not limiting.

Claim 1 recites: An apparatus in a telecommunications system, comprising: a switch intelligence (e.g., Fig. 2, 226) which provides control functions for a switch fabric (e.g., Fig. 2, 222), said switch intelligence being logically separated from said switch fabric and being implemented in a separate network element from said switch fabric (e.g., Fig. 1, switch intelligence network element (SI-NE) 110 and switch fabric network element (SF-NE) 112), the switch intelligence being configured to: process information received from the switch fabric, the information comprising a facility related event associated with a call (e.g., col. 7, lines 43-53), maintain a call state associated with completing the call in accordance with a call model, the call model indicating how the information will be processed (e.g., Fig. 3; col. 6, lines 16-45), identify at least one point in call associated with completing the call (e.g., col. 3, lines 60-67), and forward a request for a telecommunications function in response to the identified at least one point in call (e.g., col. 4, lines 10-16 and col. 11, lines 6-11); a switch fabric proxy service (e.g.,

Fig. 2, 208) for providing a normalized interface between said switch fabric and said switch intelligence for communications involving said switch fabric and interfacing to said switch intelligence with a uniform application program interface, wherein the normalized interface comprises any one of a plurality of vendor-specific interfaces associated with the switch fabric (e.g., col. 6, lines 1-9); and a feature processor (e.g., Fig. 1, FP 114 and Fig. 2, 224), said feature processor configured to: receive the request for the telecommunications function, and execute the telecommunications function in response to the received request (e.g., col. 11, lines 6-11).

Claim 11 recites: An apparatus comprising: switch intelligence (e.g., Fig. 2, 226) configured to: receive notification of a facility related event associated with a call from a switch fabric (e.g., Fig. 2, 222; col. 7, lines 43-47), wherein the switch intelligence is implemented in a separate network element from a network element implementing the switch fabric (e.g., Fig. 1, SI-NE 110 and SF-NE 112) and the facility related event is received as raw or unprocessed data which is associated with user activity at a telephone device (e.g., col. 7, lines 47-58), execute a call state machine, the call state machine being responsive to the notification of the facility related event and representing processing of the call as at least one call segment, wherein the at least one call segment corresponds to a call half (e.g., Fig. 3 and Fig. 4; col. 6, lines 16-45, and col. 6, line 56 to col. 7, line 41), provide an association between the at least one call segment and at least one physical device associated with completing the call (e.g., Fig. 4; col. 8, lines 4-32), and provide connection information to the switch fabric based on the association (e.g., col. 8, lines 32-49 and col. 10, line 54 to col. 11, line 5).

Claim 14 recites: An apparatus according to claim 11, further comprising: a switch-fabric proxy service (e.g., Fig. 2, 208) for providing a normalized interface between said switch fabric

and the switch intelligence for communications involving said switch fabric, wherein said switch-fabric proxy service interfaces to said switch fabric with any one of a plurality of application programming interfaces and interfaces to said switch intelligence with a uniform application programming interface (e.g., col. 6, lines 1-15)

Claim 22 recites: An apparatus comprising: a switch intelligence (e.g., Fig. 2, 226) for providing control functions to at least one switch fabric (e.g., Fig. 2, 222), the switch intelligence comprising: processing logic (e.g., Fig. 2, 202 and 204) configured to: receive information from the at least one switch fabric, the information including a facility related event associated with a call, wherein the facility related event is received as raw or unprocessed data which is associated with user activity at a telephone device (col. 7, lines 43-58), process the received information, maintain call states in accordance with a call model for at least one party involved in the call (e.g., col. 6, lines 16-45 and col. 6, line 56 to col. 7, line 41), and provide connection information to the at least one switch fabric for completing the call (e.g., col. 8, lines 32-49 and col. 10, line 54 to col. 11, line 5).

Claim 29 recites: An apparatus, comprising: means for receiving switch-fabric communications from a switch-fabric (e.g., Fig. 2, 208), the switch-fabric communications including a facility related event associated with a call, wherein the facility related event is received as raw or unprocessed data which is associated with user activity at a telephone device (e.g., col. 7, lines 43-58); means for processing the switch-fabric communications (e.g., Fig. 2, 202 and 204), wherein the means for processing is configured to maintain call states in accordance with a call model for at least one party involved in the call and generate connection

information for completing the call (e.g., col. 6, lines 16-45, col. 6, line 56 to col. 7, line 41, and col. 8, lines 4-49); and means for translating the connection information into switch-fabric communications for use by a switch fabric (e.g., Fig. 2, 206 and 208; col. 5, line 64 to col. 6, line 15, col. 8, lines 32-49, col. 9, lines 5-21, and col. 11, lines 16-19).

Claim 30 recites: An apparatus, comprising: means for translating switch-fabric communications into communications defined according to a uniform switch-intelligence interface (e.g., Fig. 2, 208; col. 5, line 64 to col. 6, line 15); means for processing the switch fabric communications (e.g., Fig. 2, 202 and 204) comprising facility related event information associated with a call, wherein the facility related event is received as raw or unprocessed data which is associated with user activity at a telephone device (e.g., col. 7, lines 43-58), the means for processing being configured to: maintain call states for at least one party involved in the call in accordance with a call model, and execute the call model to generate connection information for completing the call (e.g., col. 6, lines 16-45, col. 6, line 56 to col. 7, line 41, and col. 8, lines 4-49); and means for translating the communications defined according to the uniform switch-intelligence interface into switch-fabric communications (e.g., Fig. 2, 206 and 208; col. 5, line 64 to col. 6, line 15, col. 8, lines 32-49, and col. 11, lines 16-19).

Claim 32 recites: An apparatus comprising: a switch-fabric proxy service (e.g., Fig. 2, 208) that is capable of at least one of translating switch-fabric communications into switch-intelligence communications, translating the switch-intelligence communications into the switch-fabric communications, translating the switch-fabric communications into communications defined according to a uniform switch-intelligence interface, or translating the communications

defined according to a uniform switch-intelligence interface into the switch-fabric communications (e.g., col. 5, line 64 to col. 6, line 15); and a switch intelligence implemented in at least one network element (e.g., Fig. 2, 226), the at least one network element being a separate network element from a network element implementing a switch-fabric that is coupled to the switch-fabric proxy service (e.g., Fig. 1, SI-NE 110 and SF-NE 112), the switch intelligence being configured to: execute a call model to generate connection information for completing a call corresponding to a request received at a switch fabric, maintain call states for at least one party involved in the call in accordance with the call model (e.g., col. 6, lines 16-45 and col. 6, line 56 to col. 7, line 41), and forward the connection information to the switch fabric via the switch-fabric proxy service (e.g., col. 8, lines 32-49 and col. 10, line 54 to col. 11, line 19).

Claim 40 recites: An apparatus comprising: a switch intelligence network element (e.g., Fig. 2, 226) for controlling a switch fabric network element (e.g., Fig. 2, 222), wherein said switch intelligence network element comprises: processing logic (e.g., Fig. 2, 202 and 204) configured to: receive notification information comprising a facility related event associated with a call from the switch fabric network element, wherein the facility related event is received as raw or unprocessed data which is associated with user activity at a telephone device (e.g., col. 7, lines 43-58), and perform call half processing for at least one party associated with the call in response to the notification information and in accordance with a call model (e.g., Fig. 3 and Fig. 4; col. 6, lines 16-45, and col. 6, line 56 to col. 7, line 41).

Claim 44 recites: An apparatus comprising: a feature processor for executing at least one telecommunications function (e.g., Fig. 1, FP 114/115 and Fig. 2, 224); and switch intelligence

(e.g., Fig. 2, 226) configured to: receive facility related event data associated with a call from a switch fabric, wherein the facility related event is received as raw or unprocessed data which is associated with user activity at a telephone device (e.g., col. 7, lines 43-58), perform call half processing associated with at least one party to the call in response to the facility related event data and in accordance with a call model, and provide connection information to an entity that received the call, wherein the connection information identifies physical connections to complete the call (e.g., col. 6, lines 16-45, col. 6, line 56 to col. 7, line 41, and col. 8, lines 32-49), wherein the switch intelligence is implemented in at least one network element, the at least one network element being a separate network element from the entity that received the call (e.g., Fig. 1, SI-NE 110 and SF-NE 112).

Claim 45 recites: An apparatus for controlling a switch fabric, the apparatus being implemented in at least one network element, the at least one network element being separate from the switch fabric (e.g., Fig. 1, SI-NE 110), the apparatus comprising: logic for processing a facility related event received from the switch fabric in accordance with a call model (e.g., Fig. 2, 202 and 204), wherein the facility related event is received as raw or unprocessed data which is associated with user activity at a telephone device (e.g., col. 7, lines 43-58), logic for performing call half processing (e.g., Fig. 2, 202) for at least one party involved in the call in response to the facility related event and in accordance with the call model (e.g., Fig. 3 and Fig. 4; col. 6, lines 16-45, and col. 6, line 56 to col. 7, line 41), and logic for forwarding connection information to the at least one switch fabric (e.g., Fig. 2, 208; col. 10, line 54 to col. 11, line 19).

Claim 47 recites: An apparatus, comprising: a call completion device for providing bearer functions (e.g., Fig. 2, 222; col. 4, line 63 to col. 5, line 5), said call completion device performing communications with a switch intelligence (e.g., Fig. 1, SI-NE 110) that is implemented in a separate network element from said call completion device (e.g., Fig. 1, SF-NE 112), the call completion device being configured to: forward a facility related event associated with a call to the switch intelligence, wherein the facility related event is received as raw or unprocessed data which is associated with user activity at a telephone device (e.g., col. 7, lines 43-58), and receive bearer connection information from the switch intelligence in accordance with a call model executed by the switch intelligence (e.g., col. 8, line 50 to col. 9, line 28, and col. 10, line 54 to col. 11, line 19).

Claim 51 recites: An apparatus, comprising: logic configured to receive information from a switch fabric that received a request for making a call (e.g., Fig. 2, 208), the information comprising a facility related event, wherein the facility related event is received as raw or unprocessed data which is associated with user activity at a telephone device (e.g., col. 7, lines 43-58); logic configured to perform call half processing for at least a first party or a second party associated with the call in response to the facility related event and in accordance with a call model (e.g., Fig. 2, 202; Figs. 3 and 4; col. 6, lines 16-45, and col. 6, line 56 to col. 7, line 41); logic configured to generate connection information for the entity that received the request (e.g., Fig. 2, 206; col. 8, lines 33-55); and logic configured to forward the connection information to the entity that received the request (e.g., Fig. 2, 208; col. 11, lines 2-19).

Claim 56 recites: The apparatus of claim 11, wherein the facility related event comprises at least one of on-hook, off-hook or wink (e.g., col. 7, lines 50-54).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

- A. Claims 1-8 have been rejected under 35 U.S.C. § 112, second paragraph.
- B. Claims 45, 51, 53 and 54 have been rejected under 35 U.S.C. § 101.
- C. Claims 11-51, 53, 54, 56, 57, 59, 61 and 62 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Bartholomew et al. (U.S. Patent No. 5,712,903; hereinafter Bartholomew).
- D. Claims 47-50 have been rejected under 35 U.S.C. § 102(e) as being anticipated by La Porta et al. (U.S. Patent No. 5,434,852; hereinafter La Porta).

VII. **ARGUMENT**

A. Rejection under 35 U.S.C. § 112, second paragraph

1. Claims 1-8

The Office Action states that the phrase “in call” is unclear and confusing “as it is not known if this is an ‘incoming call’, a different call, or part of the ‘call’ in line 9.” The Office Action further states that the term “in call” cannot be assumed to be referring to the call in line 9 (Office Action - page 2).

The phrase “point in call,” as recited in claim 1, is a term of art that refers to the position or phase of a telephone call (e.g., off-hook, answered, etc.). Therefore, the phrase “identify at least one point in call associated with completing the call” refers to identifying at least one phase or position associated with the call first recited in lines 7-8 of claim 1 (i.e., process information received from the switch fabric, the information comprising a facility related event associated with a call). Accordingly, the Appellants respectfully submit that the phrase “point in call” is not unclear or confusing.

Appellants also note that the feature alleged to be confusing has been present in claim 1 since the amendment filed on October 21, 2004. Since that time, none of the Office Actions indicated that this phrase “point in call” was unclear or confusing. While the Appellants understand that the Examiner may apply a new rejection at any time, the Appellants note that pending claim 1 was previously allowed by the present Examiner (see Office Action dated June 4, 2007). The Appellants respectfully assert that the previous indication of allowance indicates that the language of claim 1 was not unclear or confusing at that time and that the language of claim 1 is not unclear or confusing at the present time.

In any event, in accordance with the discussion above, the Appellants respectfully request

Appeal Brief

Application Serial No. 10/054,245
Attorney Docket No. CCK94028RE

withdrawal of the rejection of claim 1 and its dependent claims 2-8.

B. Rejection under 35 U.S.C. § 101

1. Claims 45, 51, 53 and 54

The Office Action states that claims 45, 51, 53 and 54 merely recite an apparatus that include “logic,” wherein “logic is merely software and therefore is non-statutory subject matter” (Office Action - page 3). The Appellants respectfully disagree.

Initially, the Appellants note that claims 45, 51, 53 and 54 have included the term “logic” since the amendment filed October 21, 2004 and no rejection/objection has been made to the format of these claims until the present Office Action. In any event, the mere fact that claims 45, 51, 53 and 54 include only “logic” for performing various functions does not mean that these claims are directed to software and are therefore non-statutory.

The Appellants also note that the PTO issued Interim Examination Instructions for Evaluating Subject Matter Eligibility Under 35 U.S.C. § 101 on August 24, 2009, which is after the date of the present Office Action. However, the Appellants respectfully assert that the rejection was inappropriate prior to the effective date of these Interim Examination Instructions and remains inappropriate based on the current Interim Examination Instructions.

For example, claims 45 is directed to an apparatus, which falls in one of the four patent-eligible subject matter categories (i.e., a machine). In addition, in accordance with the product flowchart in the Interim Examination Instructions, product claims that do not recite an abstract idea, law of nature or natural phenomenon qualify as eligible subject matter.

Further, even if, for the sake of argument, the apparatus of claim 45 could be construed to include only software, claim 45 recites that the logic has a practical application/real world use (e.g., forwarding connection information to a switch fabric). In accordance with the PTO Interim Examination Instructions, such a practical application/real world use indicates that claim 45 is

eligible for patent protection.

Similar to the discussion above, claim 51 recites an apparatus that falls into one of the four patent-eligible categories and also recites a practical application/real world use (e.g., generating and forwarding connection information to an entity). In accordance with the PTO Interim Examination Instructions, such a practical application/real world use indicates that the claim 51 and its dependent claims 53 and 54 are eligible for patent protection.

For at least the reasons discussed above, the Appellants respectfully request reversal of the rejection of claims 45, 51, 53 and 54 under 35 U.S.C. § 101 as allegedly being drawn to non-patentable subject matter.

C. Rejection under 35 U.S.C. § 102 based on Bartholomew

The initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention always rests upon the Examiner. In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). A proper rejection under 35 U.S.C. § 102 requires that a single reference teaches every element set forth in the claim, either expressly or inherently. See M.P.E.P. § 2131.

1. Claims 11-13 and 16-21

With these principles in mind, claim 11 recites an apparatus that includes switch intelligence configured to receive notification of a facility related event associated with a call from a switch fabric, wherein the switch intelligence is implemented in a separate network element from a network element implementing the switch fabric and the facility related event is received as raw or unprocessed data which is associated with user activity at a telephone device.

The Office Action states that Bartholomew discloses these features and points to Figs. 1, 4 and 9, along with col. 6, lines 28-33, col. 7, lines 23-36 and col. 8, lines 1-11 for support (Office Action - pages 3-4). Initially, the Appellants note that the Examiner has not clearly indicated which device in Bartholomew allegedly corresponds to the switch intelligence recited in claim 11. The Appellants assume, based on the reference to Fig. 4 and to corresponding portions of the specification, that the Intelligent Peripheral (IP) in Bartholomew is being alleged to correspond to the claimed switch intelligence. However, for completeness, the Appellants will also address other elements in Bartholomew, such as the Intelligent Service Control Point (ISCP), that the Examiner may be alleging corresponds to the claimed switch intelligence of claim 11.

Bartholomew at col. 6, lines 28-33 discloses that service switching point (SSP) type switches can recognize a variety of events as triggers for activating a query and response type

advanced intelligent network (AIN) interaction with an intelligent service control point (ISCP).

This portion of Bartholomew further discloses that if a subscriber has a speech responsive autodialing service, an off-hook immediate trigger might be stored in the translation table file for that subscriber in the SSP. The SSP would detect the trigger each time the subscriber goes off hook on that line and would then attempt to obtain further instructions from the ISCP. Therefore, this portion of Bartholomew clearly discloses that the ISCP (which the Appellants will address herein for completeness) does not receive a facility related event that is received as raw or unprocessed data associated with user activity at a telephone device. In contrast, Bartholomew discloses that the SSP receives the raw or unprocessed facility related event, such as an off-hook indication in this case, and then attempts to obtain instructions from the ISCP.

Bartholomew at col. 7, lines 23-36 refers to Fig. 4A and discloses that IP 35 of Fig. 3 may consist of two general purpose computers that include voice processing cards. Bartholomew at col. 8, lines 1-11 refers to the architecture of Fig. 4B which illustrates an alternate embodiment of IP 35 of Fig. 3, where IP 35 includes separate modules for different types of services, such as direct talk type server modules 203A and 203B for interfacing the trunk to the SSP, a speech recognition module 205, a fax server module 207 and a voice mail server module 209. This portion of Bartholomew also discloses that direct talk modules 203A and 203B provide voice message transmission and dialed digit collection capabilities.

IP 35, including direct talk server modules 203A and 203B, may provide dialed digit collection capabilities. The Appellants will assume for this Appeal Brief that the dialed digit collection is considered by the Examiner to correspond to receiving raw or unprocessed data associated with user activity at a telephone device, as recited in claim 11. The Appellants respectfully disagree.

As illustrated in Fig. 4B, the SSP is connected to STP and ISCP 40, which forwards information via router 211 and IP communications server 213 to direct talk server modules 203A and 203B. Even though direct talk server modules 203A and 203B may provide dialed digit collection capabilities, the Appellants assert that the architecture of IP 35 illustrated in Fig. 4B does not allow IP 35 to receive a facility related event as raw or unprocessed data, as recited in claim 11. Rather, the dialed digit information is necessarily processed by, for example, the SSP and/or STP. In addition, even if, for the sake of argument, IP 35 could be construed as receiving the facility related event recited in claim 11, IP 35 does not perform the other functions of the claimed switch intelligence.

For example, claim 11 also recites that the switch intelligence is configured to execute a call state machine, the call state machine being responsive to the notification of the facility related event and representing processing of the call as at least one call segment, wherein the at least one call segment corresponds to a call half. The Office Action states that Bartholomew discloses these features and points to Figs. 1, 4 and 9 of Bartholomew along with col. 6, lines 34-65, col. 8, lines 9-34, and col. 10, lines 10-64 for support (Office Action - page 4). The Appellants respectfully disagree.

Bartholomew at col. 6, lines 34-65 discloses that ordinary calls do not trigger AIN processing (col. 6, lines 34-38). This portion of Bartholomew also discloses that in a first mode of operation, a service switching point (SSP) type office which detects a trigger suspends call processing, compiles a transactions capabilities applications protocol (TCAP) formatted call data message and forwards the message to ISCP 40, which includes the service control point (SCP) database 43. ISCP 40 accesses its stored data table to translate the received message into a call control message and returns the call control message to the office of the network and the SSP

(col. 6, lines 38-51).

Therefore, this portion of Bartholomew relates to processing performed by ISCP 40. ISCP 40, as discussed above, does not receive notification of a facility related event that is received as raw or unprocessed data which is associated with user activity at a telephone device, as recited in claim 11. ISCP 40, in contrast, receives a compiled TCAP message. Such a compiled message cannot be fairly construed to correspond to raw or unprocessed data which is associated with user activity at a telephone device, as required by claim 11. ISCP 40 also does not execute a call state machine, as required by claim 11. ISCP 40, in contrast, merely translates a received message into a call control message.

Bartholomew at col. 8, lines 9-34 refers to Fig. 4B, which as discussed above illustrates an alternate embodiment of IP 35 used in the network of Fig. 3. More particularly, Bartholomew at col. 8, lines 9-34 discloses that direct talk modules 203A and 203B may correspond to an IP that provides voice message transmission and dialed digit collection capabilities. This portion of Bartholomew also disclose that the direct talk modules 203A/203B may demodulate incoming data and convert the data to a digital format compatible with the internal data communication network (col. 8, lines 24). This portion of Bartholomew further discloses that IP 35 includes a communications server 213, which provides communication access to the second signaling communication system and ISCP 40. This portion of Bartholomew may disclose that IP 35 of Fig. 3 includes direct talk modules that provide dialed digit collection, which the Examiner is apparently equating to raw or unprocessed data associated with user activity at a telephone device.

IP 35 of Bartholomew illustrated in the embodiment of Fig. 4B, however, does not disclose that IP 35 executes a call state machine, much less that the call state machine is

responsive to the notification of the facility related event and representing processing of the call as at least one call segment, wherein the at least one call segment corresponds to a call half, as also required by claim 11. In contrast, IP 35 is merely an intelligent peripheral that provides particular voice processing services for a call. The call state machine in Bartholomew is clearly not implemented in IP 35, but in the SSP (discussed in more detail below).

Bartholomew at col. 10, lines 10-64 discloses various objects associated with the invention of Bartholomew (col. 10, lines 10-23). This portion of Bartholomew further discloses that an IP platform offers auxiliary call processing and/or enhanced auxiliary service features and involves exchanges of messages between the intelligent peripheral platforms and the signaling communication systems (col. 10, lines 24-64). This portion of Bartholomew does not disclose that IP 35 (or ISCP 40), executes a call state machine, much less that the call state machine is responsive to the notification of the facility related event and representing processing of the call as at least one call segment, wherein the at least one call segment corresponds to a call half, as required by claim 11.

Claim 11 further recites that the switch intelligence is configured to provide an association between the at least one call segment and at least one physical device associated with completing the call, and provide connection information to the switch fabric based on the association. The Office Action states that Bartholomew discloses these features and points to col. 8, lines 35-62 for support (Office Action - page 4).

Bartholomew at col. 8, lines 35-62 discloses that the SSP switch routes calls to different elements of the IP in response to instructions from ISCP 40. IP 35 (or ISCP 40), however, does not execute a call state machine that represents processing of the call as at least one call segment, where the at least one call segment corresponds to a call half. Therefore, IP 35 (or ICSP 40) of

Bartholomew cannot provide an association between the at least one call segment and at least one physical device. In contrast, IP 35 merely receives calls that require processing by one of direct talk modules 203A/203B, speech recognition module 205, fax server module 209 or voice mail server module 209. Such processing by one of these modules does not correspond to executing a call state machine as required by claim 11.

For at least these reasons, Bartholomew clearly does not disclose each of the features of claim 1.

Lastly, the Appellants note that in the telephone interview on February 13, 2009, the Appellants' representative pointed out that Bartholomew included overlapping disclosure with Wheeler, Jr. (U.S. Patent No. 5,583,920; hereinafter Wheeler, which is assigned to a common Assignee as Bartholomew), which was applied to reject previously provided claims several Office Actions ago (see Office Actions dated May 21, 2004 and October 21, 2005). For example, Figs. 3, 4A and 4B of Bartholomew closely correspond to Figs. 1A, 3 and 4, respectively, of Wheeler. The Appellants' representative respectfully requested that the Examiner review arguments made with respect to Wheeler in the responses filed October 21, 2004 and February 21, 2006 before applying Bartholomew to any of the pending claims since Bartholomew includes a similar call processing environment as Wheeler. The Appellants again respectfully point to the response filed February 21, 2006 (e.g., pages 2-7) for a thorough discussion regarding Advanced Intelligent Networking (AIN) processing with respect to call state machines. As discussed in the response filed on February 21, 2006, terms such as "call state," "call model," "points in call," etc., have very well known meaning in this art. Similar to the discussion regarding the call state environment in Wheeler, Bartholomew discloses a conventional call state environment in which a service switching point (SSP) executes the call

state machine. The IP and ISCP in Bartholomew provide peripheral processing associated with the call, but clearly do not execute a call state machine, as recited in claim 11.

For at least these reasons, the Appellants respectfully submit that the imposed rejection of claim 11 under 35 U.S.C. § 102 based on Bartholomew is improper. Accordingly, reversal of the rejection of claims 11-13 and 16-21 is respectfully requested.

2. Claims 14 and 15

Claim 14 is dependent on claim 11 and recites that the apparatus further comprises a switch-fabric proxy service for providing a normalized interface between said switch fabric and the switch intelligence for communications involving said switch fabric, wherein said switch-fabric proxy service interfaces to said switch fabric with any one of a plurality of application programming interfaces and interfaces to said switch intelligence with a uniform application programming interface. The Office Action states that Bartholomew discloses these features and points to col. 10, lines 10-19 for support (Office Action – page 4). The Appellants respectfully disagree.

Bartholomew at col. 10, lines 10-19 discloses that an object of Bartholomew is to provide an intelligent peripheral which provides an application program interface for multi-application capability. This portion of Bartholomew also discloses that an object of Bartholomew provides an AIN network with seamless integration/migration and interaction between services. This portion of Bartholomew does not disclose or suggest an apparatus that includes the claimed switch intelligence also includes a switch-fabric proxy service, much less a switch-fabric proxy service for providing a normalized interface between said switch fabric and the switch intelligence for communications involving said switch fabric, wherein said switch-fabric proxy

service interfaces to said switch fabric with any one of a plurality of application programming interfaces and interfaces to said switch intelligence with a uniform application programming interface. In contrast, this portion of Bartholomew merely discloses that intelligent peripherals include APIs. Such a disclosure is not equivalent to a switch-fabric proxy service as recited in claim 14.

For at least these reasons, the Appellants respectfully submit that the imposed rejection of claim 14 under 35 U.S.C. § 102 based on Bartholomew is improper. Accordingly, reversal of the rejection of claims 14 and 15 is respectfully requested.

3. Claims 22-31

Claim 22 recites an apparatus that includes a switch intelligence for providing control functions to at least one switch fabric, the switch intelligence comprising processing logic configured to receive information from the at least one switch fabric, the information including a facility related event associated with a call, wherein the facility related event is received as raw or unprocessed data which is associated with user activity at a telephone device.

The Office Action states that Bartholomew discloses these features and points to Figs. 1, 4 and 9, along with col. 6, lines 28-33, col. 7, lines 23-36 and col. 8, lines 1-11 for support (Office Action - page 5). Similar to the discussion above with respect to claim 11, IP 35 (or ISCP 40) of Bartholomew does not receive notification of a facility related event associated with a call, wherein the facility related event is received as raw or unprocessed data which is associated with user activity at a telephone device, as recited in claim 22.

Claim 22 also recites that the switch intelligence is configured to process the received information, maintain call states in accordance with a call model for at least one party involved

in the call, and provide connection information to the at least one switch fabric for completing the call. The Office Action states that Bartholomew these features and points to col. 6, lines 34-65, col. 8, lines 9-34, col. 10, lines 10-64 and col. 12, lines 1-5 for support (Office Action - page 5). The Appellants respectfully disagree.

Similar to the discussion above with respect to claim 11, IP 35 (or ISCP 40) of Bartholomew does not maintain call states in accordance with a call model for a party involved in a call. As also discussed above, IP 35 merely performs services associated with a call. IP 35 (or ISCP 40) clearly does not maintain any call states in accordance with a call model for at least one party involved in the call, as required by claim 22.

For at least these reasons, Bartholomew does not disclose each of the features of claim 22 and the Appellants respectfully submit that the imposed rejection of claim 22 under 35 U.S.C. § 102 based on Bartholomew is improper. Accordingly, reversal of the rejection of claims 22-31 is respectfully requested.

4. Claims 32-39

Claim 32 recites an apparatus that comprises a switch-fabric proxy service that is capable of at least one of translating switch-fabric communications into switch-intelligence communications, translating the switch-intelligence communications into the switch-fabric communications, translating the switch-fabric communications into communications defined according to a uniform switch-intelligence interface, or translating the communications defined according to a uniform switch-intelligence interface into the switch-fabric communications.

The Office Action states that Bartholomew discloses these features and points to Figs. 1, 4 and 9, along with col. 6, lines 34-65, col. 8, lines 9-34 and col. 10, lines 10-64 for support

(Office Action - page 8). Initially, the Appellants note that the Examiner has not clearly indicated which device in Bartholomew allegedly corresponds to the switch-fabric proxy service recited in claim 32. The portions cited to support the rejection are the same portions of Bartholomew used to allegedly disclose the claimed switch intelligence (discussed previously). In any event, the portions of Bartholomew referenced in the Office Action do not disclose that IP 35 (or ISCP 40) includes a switch-fabric proxy service, as recited in claim 32. In contrast, IP 35 is an intelligent peripheral that performs various peripheral call processing.

Claim 32 also recites that the apparatus includes a switch intelligence implemented in at least one network element, the at least one network element being a separate network element from a network element implementing a switch-fabric that is coupled to the switch-fabric proxy service, the switch intelligence being configured to: execute a call model to generate connection information for completing a call corresponding to a request received at a switch fabric, maintain call states for at least one party involved in the call in accordance with the call model, and forward the connection information to the switch fabric via the switch-fabric proxy service.

The Office Action states that Bartholomew discloses these features and points to col. 6, lines 34-65, col. 8, lines 9-34, col. 10, lines 10-64 for support (Office Action - page 8). The Appellants respectfully disagree.

Similar to the discussion above with respect to claim 11, IP 35 (or ISCP 40) of Bartholomew does not execute a call model, much less maintain call states for at least one party involved in the call in accordance with the call model. As also discussed above, IP 35 merely performs services associated with a call. The call model in Bartholomew, as discussed above, is executed by the SSP and not the apparatus that includes the switch intelligence.

For at least these reasons, Bartholomew does not disclose each of the features of claim

32. Accordingly, reversal of the rejection of claims 32-39 is respectfully requested.

5. Claim 40-43, 45, 46, 51, 53 and 54

Claim 40 recites an apparatus comprising a switch intelligence network element for controlling a switch fabric network element, wherein said switch intelligence network element comprises processing logic configured to receive notification information comprising a facility related event associated with a call from the switch fabric network element, wherein the facility related event is received as raw or unprocessed data which is associated with user activity at a telephone device. The Office Action has not completed addressed these features. That is, the Office Action has not addressed the features that the facility related event is received as raw or unprocessed data which is associated with user activity at a telephone device (Office Action - page 10). For completeness, the Appellants will assume that the other portions of Bartholomew discussed with respect to, for example, claim 11 is considered to disclose the facility related event is received as raw or unprocessed data associated with user activity at a telephone device.

In any event, the portions of Bartholomew discussed above with respect to claim 11 do not disclose or suggest that IP 35 (or ISCP 40) receive notification information comprising a facility related event that is received as raw or unprocessed data associated with user activity at a telephone device these features. In addition, the other portion of Bartholomew referenced in the Office Action (i.e., col. 15, lines 10-35) refers to Fig. 7 and discloses that the CPU communicates with the ISCP which includes transferring voice mail messages over the common channel signaling network. This portion of Bartholomew does not disclose that IP 35 (or ISCP 40) receive notification comprising a facility related event, where the facility related event is

received as raw or unprocessed data associated with user activity at a telephone device, as required by claim 40.

Claim 40 also recites that the processing logic is configured to perform call half processing for at least one party associated with the call in response to the notification information and in accordance with a call model. The Office Action states that Bartholomew discloses these features and points to col. 6, lines 34-65, col. 8, lines 9-34, col. 10, lines 10-64 for support (Office Action - page 10). The Appellants respectfully disagree.

Similar to the discussion above with respect to claims 11 and 22, IP 35 (or ISCP 40) of Bartholomew does not perform call half processing for at least one party associated with the call, much less that the call half processing is performed in response to the notification information and in accordance with a call model, as further required by claim 40. In contrast, IP 35 merely performs peripheral services associated with a call.

For at least these reasons, Bartholomew does not disclose each of the features of claim 40 and the Appellants respectfully submit that the imposed rejection of claim 40 under 35 U.S.C. § 102 based on Bartholomew is improper. Accordingly, reversal of the rejection of claims 40-43, 45, 46, 51, 53 and 54 is respectfully requested.

6. Claim 44

Claim 44 recites an apparatus that comprises a feature processor for executing at least one telecommunications function, and switch intelligence configured to receive facility related event data associated with a call from a switch fabric, wherein the facility related event is received as raw or unprocessed data which is associated with user activity at a telephone device. The Office Action does not indicate which device in Bartholomew is alleged to correspond to the claimed

feature processor (Office Action - page 11). The Office Action also merely points to the same portions of Bartholomew discussed above (i.e., col. 6, lines 34-65, col. 8, lines 9-34 and col. 10, lines 10-64) as allegedly disclosing the claimed switch intelligence (Office Action - page 11).

As discussed above, the portions of Bartholomew referenced in the Office Action (or any other portions) do not disclose or suggest that IP 35 (or ISCP 40) receive facility related event data associated with a call from a switch fabric, where the facility related event is received as raw or unprocessed data associated with user activity at a telephone device, as required by claim 44. Claim 44 also recites that the switch intelligence is also configured to perform call half processing associated with at least one party to the call in response to the facility related event data and in accordance with a call model, and provide connection information to an entity that received the call, wherein the connection information identifies physical connections to complete the call. The Office Action also merely points to the same portions of Bartholomew discussed above (i.e., col. 6, lines 34-65, col. 8, lines 9-34 and col. 10, lines 10-64) as allegedly disclosing these features (Office Action - page 11). The Appellants respectfully disagree.

Similar to the discussion above with respect to claim 11 and 22, Bartholomew does not disclose that IP 35 (or ISCP 40) performs call half processing in response to the facility related even and in accordance with a call model, as required by claim 44.

For at least these reasons, Bartholomew does not disclose each of the features of claim 44. Accordingly, reversal of the rejection of claim 44 is respectfully requested.

7. Claims 47-50

Claim 47 recites an apparatus that comprises a call completion device for providing bearer functions, said call completion device performing communications with a switch

intelligence that is implemented in a separate network element from said call completion device.

Claim 47 also recites that the call completion device is configured to forward a facility related event associated with a call to the switch intelligence, wherein the facility related event is received as raw or unprocessed data which is associated with user activity at a telephone device. The Office Action states that Bartholomew discloses these features and points to col. 6, lines 28-33, col. 7, lines 23-36 and col. 8, lines 1-11 for support (Office Action - page 12). The Appellants respectfully disagree.

As discussed above, the portions of Bartholomew referenced in the Office Action do not disclose that IP 35 (or ISCP 40) receives a facility related event as raw or unprocessed data associated with user activity at a telephone device. Therefore, Bartholomew cannot disclose that one of the SSPs in Bartholomew (e.g., SSP 11 or 13 in Fig. 3 or the SSPs in Fig. 4B and 9) forward the claimed facility related event to a switch intelligence, as required by claim 47.

Claim 47 also recites that the call completion device is configured to receive bearer connection information from the switch intelligence in accordance with a call model executed by the switch intelligence. The Office Action states that Bartholomew discloses these features and points to the same portions of Bartholomew discussed above (Office Action - page 12). The Appellants respectfully disagree.

As discussed above, Bartholomew does not disclose that the switch intelligence executes a call model. Therefore, Bartholomew cannot disclose receiving bearer connection information from the switch intelligence in accordance with a call model executed by the switch intelligence, as further required by claim 47.

For at least these reasons, Bartholomew does not disclose each of the features of claim 47. Accordingly, reversal of the rejection of claims 47-50 is respectfully requested.

8. Claims 56, 57, 59, 61 and 62

Claim 56 is dependent on claim 11 and recites that the facility related event comprises at least one of on-hook, off-hook or wink. The Office Action states that Bartholomew discloses this feature and points to col. 6, lines 28-33 and col. 8, lines 1-11 for support (Office Action – page 13). The Appellants respectfully disagree.

Bartholomew at col. 6, lines 28-33 discloses that SSP type switches can recognize a variety of event triggers. More particularly, this portion of Bartholomew discloses that if a subscriber has a speech responsive autodialing service, an off-hook immediate trigger might be stored in the translation table file for that subscriber in the SSP and the SSP would detect the trigger each time the subscriber goes off-hook. As discussed above, the SSP in Bartholomew detects the off-hook indication. Claim 56, in contrast, requires that the switch intelligence that executes the call state machine receives the notification of a facility related event. In other words, the Office Action has indicated that IP 35 (or ISCP 40) allegedly corresponds to the switch intelligence recited in claim 11. Therefore, the fact that the SSP in Bartholomew receives the off-hook trigger does not mean that either IP 35 (or ISCP 40) receive the off-hook indication, as would be required by claim 56 based on the alleged equivalence of the IP 35 (or ISCP 40) to the claimed switch intelligence. In contrast, Bartholomew clearly does not disclose that either IP 35 (or ISCP 40) receive notification of a facility related event that comprises at least one of on-hook, off-hook or wink.

Bartholomew at col. 8, lines 1-11 discloses that direct talk voice server modules 203A and 203B interface the trunk to the SSP and provide voice message transmission and dialed digit collection capabilities. This portion of Bartholomew does not disclose that IP 35 (alleged to

correspond to the claimed switch intelligence) receives notification of a facility related event that comprises at least one of on-hook, off-hook or wink.

For at least these reasons, the Appellants respectfully submit that the imposed rejection of claim 56 under 35 U.S.C. § 102 based on Bartholomew is improper. Accordingly, reversal of the rejection of claims 56, 57, 59, 61 and 62 is respectfully requested.

D. Rejection under 35 U.S.C. § 102 based on La Porta**1. Claims 47-50**

Claim 47 recites a call completion device for providing bearer functions. Claim 47 recites that the call completion device is configured to forward a facility related event associated with a call to the switch intelligence, wherein the facility related event is received as raw or unprocessed data which is associated with user activity at a telephone device. The Office Action does not completely address these features, but states that La Porta discloses forwarding a facility related event associated with a call to the switch intelligence and points to col. 7, lines 11-25 for support (Office Action – page 14). That is, the Office Action does not allege that the facility related event in La Porta is received as raw or unprocessed data associated with user activity at a telephone device.

The Appellants note that during a telephone interview on August 31, 2007, the Examiner indicated that clarification that the “facility related event” is received as raw or unprocessed data would overcome the outstanding rejections at the time, which included the rejection of claims 47-50 based on La Porta (See Remarks at page 21 of the Amendment filed September 4, 2007 briefly summarizing the telephone interview of August 31, 2007). While the Appellants understand that nothing communicated in the telephone interview is binding, the Appellants point to that earlier discussion in case the rejection regarding claims 47-50 was inadvertently included herein (also in light of the fact that the addition to claim 47 that the facility related event is received as raw or unprocessed data was not addressed in the present Office Action).

In any event, La Porta does not disclose the features of claim 47. For example, La Porta at col. 7, lines 11-25 discloses that channel servers 507 and 512 are associated with switches 508 and 510 and that the channel servers maintain all instances of the channel object associated with

the ports of their associated switch (col. 7, lines 11-17). This portion of La Porta further discloses that connection server 504 provides bearer services with capabilities to add, drop or modify a connection through switches 508 and 510. La Porta also discloses that when connection server 504 has selected routes for the connections, it invokes the services of channel servers 506/511 to establish the virtual channel links (La Porta – col. 7, line 66 to col. 8, line 1). La Porta further discloses that connection server 504 returns a result message to call server 502 indicating that the requested connections have been established (La Porta – col. 8, lines 1-9).

La Porta, however, does not disclose or suggest that a call completion device (presumably one of switches 508 or 510 and/or one of channel servers 507 or 512) forwards a facility related event associated with a call to call server 502 or connection server 504, as would be required by claim 47, much less that the facility related event is received as raw or unprocessed data associated with user activity at a telephone device, as also required by claim 47.

Claim 47 also recites that the call completion device is configured to receive bearer connection information from the switch intelligence in accordance with a call model executed by the switch intelligence. The Office Action states that La Porta discloses this feature and points to col. 7, lines 11-25 for support (Office Action - page 14).

La Porta at col. 7, lines 11-25 has been discussed above. This portion of La Porta does not disclose that one of switches 508 or 510 (or channel servers 507 or 512) receives bearer connection information from call server 502 or connection server 504 in accordance with a call model executed by call server 502/connection server 504, as would be required by claim 47.

For at least these reasons, the Appellants respectfully submit that the imposed rejection of claim 47 under 35 U.S.C. § 102 based on La Porta is improper. Accordingly, reversal of the

Appeal Brief

Application Serial No. 10/054,245
Attorney Docket No. CCK94028RE

rejection of claims 47-50 is respectfully requested.

CONCLUSION

In view of the foregoing arguments, the Appellants respectfully solicit the Honorable Board to reverse the Examiner's rejection of claims 1-8, 11-51, 53, 54, 56, 57, 59, 61 and 62. In addition, as the Appellants' remarks with respect to the Examiner's rejections are sufficient to overcome the rejections, the Appellants' silence as to assertions by the Examiner in the Office or certain requirements that may be applicable to such rejections (e.g., whether a reference constitutes prior art) is not a concession by the Appellants that such assertions are accurate or such requirements have been met, and the Appellants reserve the right to analyze and dispute such in the future.

Appeal Brief

Application Serial No. 10/054,245
Attorney Docket No. CCK94028RE

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 50-4752 and please credit any excess fees to such deposit account.

Respectfully submitted,

SNYDER, CLARK, LESCH & CHUNG, L.L.P.

By: /Glenn Snyder, Reg. No. 41,428/
Glenn Snyder
Reg. No. 41,428

Date: January 19, 2010

754 Elden Street
Suite 202
Herndon, VA 20170
Telephone: (571) 323-5145
Facsimile: (703) 439-2658
Customer Number: 25537

VIII. CLAIMS APPENDIX

1. An apparatus [for decentralizing communication services] in a telecommunications system, comprising:

[a switch fabric which provides bearer functions;]

a switch intelligence which provides control functions for [said] a switch fabric, said switch intelligence being logically separated from said switch fabric and being implemented in a separate network element from said switch fabric, the switch intelligence being configured to:

process information received from the switch fabric, the information comprising a facility related event associated with a call,

maintain a call state associated with completing the call in accordance with a call model, the call model indicating how the information will be processed,

identify at least one point in call associated with completing the call, and forward a request for a telecommunications function in response to the identified at least one point in call;

a switch fabric proxy service for providing a normalized interface between said switch fabric and said switch intelligence for [all] communications involving said switch fabric [by interfacing to said switch fabric with any one of a plurality of application program interfaces] and interfacing to said switch intelligence with a uniform application program interface, wherein the normalized interface comprises any one of a plurality of vendor-specific interfaces associated with the switch fabric; and

a feature processor, said feature processor configured to:

receive the request for the telecommunications function, and

execute the [executing at least one] telecommunications function in

response to the received request[, for interacting with said switch intelligence to thereby provide said telecommunications feature].

2. The [system] apparatus of claim 1, wherein said switch intelligence [further] comprises:

[at least one facility instance instantiated by a] facility service logic [using a facility model, said facility instance representing the] configured to represent bearer and signaling facilities of a party to [a] the call, for interacting with said switch fabric proxy service to communicate with said switch fabric, the facility service logic configured to receive the facility related event and perform protocol processing on the information received from the switch fabric, wherein the facility related event comprises at least one of an off-hook indication, an on-hook indication or a wink.

3. The [system] apparatus of claim 2, wherein said switch intelligence further comprises:
[a] connection manager logic configured to forward connection information to the switch fabric, the connection information instructing the switch to establish physical connections to complete the call [service representing the connectors for said party to a call for interacting with said switch fabric proxy service to communicate with said switch fabric].

4. The [system] apparatus of claim [3] 1, wherein said switch intelligence [further] comprises:

[at least one call segment instance instantiated by a] call segment [instance service] logic configured to:

represent a status of at least two call halves associated with completing the call in accordance with the call model, and

perform call processing for each of the at least two call halves

[using a call model, said call segment instance representing the call logic and call data for said party to a call, for interacting with said feature processor, said connection manager service, and said facility instance].

5. The [system] apparatus of claim [2] 1, wherein said switch intelligence [further] comprises:

a [first] call processing creation environment, said [first] call processing creation environment interacting with said [facility service,] switch intelligence for modifying said [facility] call model without modifying the switch fabric.

6. The [system] apparatus of claim 4, wherein said switch intelligence further comprises:
a [second] call processing creation environment, said [second] call processing creation environment interacting with said call segment [instance service] logic, for modifying said call model.

7. The [system] apparatus of claim 2, wherein said switch intelligence further comprises:
a [third] call processing creation environment, said [third] call processing creation environment interacting with said facility service logic[,] for creating new facility models.

8. The [system] apparatus of claim 4, wherein said switch intelligence further comprises:

a [fourth] call processing creation environment, said [fourth] call processing creation environment interacting with said call segment [instance service] logic, for creating new call models.

9. An apparatus comprising:

a switch-fabric proxy service for providing a normalized interface between a switch fabric and a switch intelligence for communications involving said switch fabric by interfacing to said switch fabric with any one of a plurality of application programming interfaces, wherein the switch fabric and the switch intelligence are implemented in separate network elements; and the switch intelligence, the switch intelligence being configured to:

receive information from the switch fabric,
perform call processing in accordance with a call model using the received information,
maintain a status of at least two call halves associated with completing the call in accordance with the call model, and
direct the switch fabric to make physical connections for each of the at least two call halves to complete the call.

10. An apparatus according to claim 9, wherein said plurality of application programming interfaces is at least one of vendor-specific or switch-fabric-specific.

11. An apparatus comprising:

switch intelligence configured to:

receive notification of a facility related event associated with a call from a switch fabric, wherein the switch intelligence is implemented in a separate network element from a network element implementing the switch fabric and the facility related event is received as raw or unprocessed data which is associated with user activity at a telephone device,

execute a call state machine, the call state machine being responsive to the notification of the facility related event and representing processing of the call as at least one call segment, wherein the at least one call segment corresponds to a call half,

provide an association between the at least one call segment and at least one physical device associated with completing the call, and

provide connection information to the switch fabric based on the association.

12. An apparatus according to claim 11, wherein said network element implementing the switch intelligence is physically separated from said network element implementing the switch fabric and is coupled to the network element implementing the switch fabric via a communications network.

13. An apparatus according to claim 11, wherein the network element implementing said switch intelligence is logically separated from the network element implementing said switch fabric.

14. An apparatus according to claim 11, further comprising:

a switch-fabric proxy service for providing a normalized interface between said switch fabric and the switch intelligence for communications involving said switch fabric, wherein said

switch-fabric proxy service interfaces to said switch fabric with any one of a plurality of application programming interfaces and interfaces to said switch intelligence with a uniform application programming interface.

15. An apparatus according to claim 14 wherein each of said plurality of application programming interfaces comprises at least one of a vendor-specific application programming interface or a switch-fabric-specific application programming interface.

16. An apparatus according to claim 11, further comprising:
a switch-fabric proxy service for providing a normalized interface between said switch fabric and the switch intelligence for communications involving said switch fabric, wherein said switch-fabric proxy service translates switch-fabric communications into switch-intelligence communications.

17. An apparatus according to claim 16 wherein said switch-fabric communications are at least one of vendor-specific or switch-fabric-specific.

18. An apparatus according to claim 11, further comprising:
a switch-fabric proxy service for providing a normalized interface between said switch fabric and the switch intelligence for communications involving said switch fabric, wherein said switch-fabric proxy service translates switch-intelligence communications into switch-fabric communications.

19. An apparatus according to claim 18, wherein said switch-fabric communications are at least one of vendor-specific or switch-fabric-specific.

20. An apparatus according to claim 11, further comprising:
a switch-fabric proxy service for providing a normalized interface between said switch fabric and the switch intelligence for communications involving said switch fabric, wherein said switch-fabric proxy service translates switch-fabric communications into communications defined according to a uniform interface.

21. An apparatus according to claim 11, further comprising:
a switch-fabric proxy service for providing a normalized interface between said switch fabric and a switch intelligence for communications involving said switch fabric, wherein said switch-fabric proxy service translates communications defined according to a uniform interface into switch-fabric communications.

22. An apparatus comprising:
a switch intelligence for providing control functions to at least one switch fabric, the switch intelligence comprising:
processing logic configured to:
receive information from the at least one switch fabric, the information including a facility related event associated with a call, wherein the facility related event is received as raw or unprocessed data which is associated with user activity at a telephone device,
process the received information,

maintain call states in accordance with a call model for at least one party involved in the call, and
provide connection information to the at least one switch fabric for completing the call.

23. An apparatus according to claim 22 wherein said switch intelligence is one of logically separated or physically separated from said at least one switch fabric, the processing logic being further configured to:

identify at least one point in the call where a telecommunications function is required,
and
send a request for the telecommunications function to a processor in response to the identified at least one point in the call.

24. An apparatus according to claim 23, further comprising:

a processor executing the telecommunications function in response to the request.

25. An apparatus according to claim 22, further comprising:
a switch fabric proxy for providing a plurality of application programming interfaces for communications between the at least one switch fabric and the switch intelligence, wherein each of said plurality of application programming interfaces comprises at least one of a vendor-specific application programming interface or a switch-fabric-specific application programming interface.

26. An apparatus according to claim 22 wherein said switch intelligence provides control functions to a plurality of switch fabrics.

27. An apparatus according to claim 22 wherein said switch intelligence further comprises at least one of a facility service, a call connection manager service, or a call segment instance service.

28. An apparatus according to claim 27 wherein said at least one of a facility service, a call connection manager service, or a call segment instance service comprises a call segment instance service, the call segment instance service configured to maintain the call states for the at least one party involved in the call.

29. An apparatus, comprising:
means for receiving switch-fabric communications from a switch-fabric, the switch-fabric communications including a facility related event associated with a call, wherein the facility related event is received as raw or unprocessed data which is associated with user activity at a telephone device;

means for processing the switch-fabric communications, wherein the means for processing is configured to maintain call states in accordance with a call model for at least one party involved in the call and generate connection information for completing the call; and
means for translating the connection information into switch-fabric communications for use by a switch fabric.

30. An apparatus, comprising:

means for translating switch-fabric communications into communications defined according to a uniform switch-intelligence interface;
means for processing the switch fabric communications comprising facility related event information associated with a call, wherein the facility related event is received as raw or unprocessed data which is associated with user activity at a telephone device, the means for processing being configured to:

maintain call states for at least one party involved in the call in accordance with a call model, and

execute the call model to generate connection information for completing the call; and

means for translating the communications defined according to the uniform switch-intelligence interface into switch-fabric communications.

31. The apparatus according to claim 30, further comprising:

means for translating communications defined according to the uniform interface into switch-intelligence communications; and

means for translating switch-intelligence communications into communications defined according to a uniform interface.

32. An apparatus comprising:

a switch-fabric proxy service that is capable of at least one of translating switch-fabric communications into switch-intelligence communications, translating the switch-intelligence

communications into the switch-fabric communications, translating the switch-fabric communications into communications defined according to a uniform switch-intelligence interface, or translating the communications defined according to a uniform switch-intelligence interface into the switch-fabric communications; and

a switch intelligence implemented in at least one network element, the at least one network element being a separate network element from a network element implementing a switch-fabric that is coupled to the switch-fabric proxy service, the switch intelligence being configured to:

execute a call model to generate connection information for completing a call corresponding to a request received at a switch fabric,

maintain call states for at least one party involved in the call in accordance with the call model, and

forward the connection information to the switch fabric via the switch-fabric proxy service.

33. An apparatus according to claim 32, wherein said switch-fabric proxy service includes a normalized interface between the switch fabric and the switch intelligence.

34. The apparatus according to claim 32, wherein said at least one network element implementing the switch intelligence is one of logically separated or physically separated from the network element implementing the switch fabric and is coupled to the network element implementing the switch fabric via a communications network.

35. An apparatus according to claim 32, wherein the switch fabric includes said switch-fabric proxy service.

36. An apparatus according to claim 32, wherein the switch intelligence is further configured to:

maintain the call model, the call model affecting how calls received by the switch fabric will be processed and wherein the call model is modifiable at the switch intelligence without modifying the switch fabric.

37. An apparatus according to claim 32, wherein said switch-fabric proxy service includes an application programming interface for interfacing with the switch fabric.

38. An apparatus according to claim 32, wherein said application programming interface is at least one of a vendor-specific interface or a switch-fabric-specific interface.

39. An apparatus according to claim 32, wherein said switch-fabric proxy service includes an application programming interface for interfacing with the switch-intelligence.

40. An apparatus comprising:
a switch intelligence network element for controlling a switch fabric network element,
wherein said switch intelligence network element comprises:
processing logic configured to:
receive notification information comprising a facility related event

associated with a call from the switch fabric network element, wherein the facility related event is received as raw or unprocessed data which is associated with user activity at a telephone device, and

perform call half processing for at least one party associated with the call in response to the notification information and in accordance with a call model.

41. An apparatus according to claim 40, wherein said processing logic is further configured to:

perform the call half processing in accordance with a call model, the call model representing at least one of an Advanced Intelligent Network (AIN) call model, an International Telecommunications Union (ITU) call model or a call model created by a service provider.

42. The apparatus according to claim 40, wherein said switch intelligence network element includes at least one of a first application programming interface communicable with a switch-fabric proxy service or a second application programming interface communicable with a feature processor that executes at least one telecommunications function.

43. The apparatus according to claim 40, further comprising at least one application programming interface communicable between at least one of a facility service, a call connection manager service, or a call segment instance service and another of said at least one of a facility service, a call connection manager service, or a call segment instance service.

44. An apparatus comprising:

a feature processor for executing at least one telecommunications function; and

switch intelligence configured to:

receive facility related event data associated with a call from a switch fabric,
wherein the facility related event is received as raw or unprocessed data which is associated with
user activity at a telephone device,

perform call half processing associated with at least one party to the call in
response to the facility related event data and in accordance with a call model, and
provide connection information to an entity that received the call, wherein the
connection information identifies physical connections to complete the call, wherein the switch
intelligence is implemented in at least one network element, the at least one network element
being a separate network element from the entity that received the call.

45. An apparatus for controlling a switch fabric, the apparatus being implemented in at
least one network element, the at least one network element being separate from the switch
fabric, the apparatus comprising:

logic for processing a facility related event received from the switch fabric in accordance
with a call model, wherein the facility related event is received as raw or unprocessed data which
is associated with user activity at a telephone device,

logic for performing call half processing for at least one party involved in the call in
response to the facility related event and in accordance with the call model, and
logic for forwarding connection information to the at least one switch fabric.

46. The apparatus of claim 45, further comprising:

interface logic including a first interface for communications between the apparatus and

the switch fabric.

47. An apparatus, comprising:

a call completion device for providing bearer functions, said call completion device performing communications with a switch intelligence that is implemented in a separate network element from said call completion device, the call completion device being configured to: forward a facility related event associated with a call to the switch intelligence, wherein the facility related event is received as raw or unprocessed data which is associated with user activity at a telephone device, and

receive bearer connection information from the switch intelligence in accordance with a call model executed by the switch intelligence.

48. The apparatus of claim 47, wherein the switch intelligence comprises a call state model, and wherein the call completion device communicates with the switch intelligence to affect a call state.

49. The apparatus of claim 48, wherein the call state is represented in the call state model.

50. The apparatus of claim 47, further comprising:

a switch fabric proxy service for providing an application programming interface for communications between the call completion device and the switch intelligence.

51. An apparatus, comprising:

logic configured to receive information from a switch fabric that received a request for making a call, the information comprising a facility related event, wherein the facility related event is received as raw or unprocessed data which is associated with user activity at a telephone device;

logic configured to perform call half processing for at least a first party or a second party associated with the call in response to the facility related event and in accordance with a call model;

logic configured to generate connection information for the entity that received the request; and

logic configured to forward the connection information to the entity that received the request.

53. The apparatus of claim 51, wherein the apparatus is implemented in a network element that is separate from the entity that received the request.

54. The apparatus of claim 51, wherein the logic configured to perform call half processing maintains call states associated with completing the call in accordance with a call model.

56. The apparatus of claim 11, wherein the facility related event comprises at least one of on-hook, off-hook or wink.

57. The apparatus of claim 22, wherein the facility related event comprises at least one of

on-hook, off-hook or wink.

59. The apparatus of claim 29, wherein the facility related event comprises at least one of on-hook, off-hook or wink.

61. The apparatus of claim 40, wherein the facility related event comprises at least one of on-hook, off-hook or wink.

62. The apparatus of claim 45, wherein the facility related event comprises at least one of on-hook, off-hook or wink.

Appeal Brief

Application Serial No. 10/054,245
Attorney Docket No. CCK94028RE

IX. EVIDENCE APPENDIX

None

Appeal Brief

Application Serial No. 10/054,245
Attorney Docket No. CCK94028RE

X. RELATED PROCEEDINGS APPENDIX

None